



REMARKS

In response to the Office Action mailed April 9, 2003, Applicants amend their application and request reconsideration and reexamination. Presently, claims 1 to 8 remain pending in the application.

The Examiner has rejected claim 7 under 35 U.S.C. § 112 noting an insufficient antecedent basis for the "pressure member" limitation in the claim. In substituting "compression member" for "pressure member," Applicant corrects a typographical error in the claim. "Compression member" is particularly pointed out, and the substitution introduces no new matter to the claim. This amendment is not a narrowing amendment.

The present invention includes a convex screw, which fits within a concave receiving element. As described in claim 1, the convex portion has a larger radius of curvature than the concave portion. During compression, this arrangement causes the material to deform somewhat to provide an interference fit. This feature significantly improves the device's locking force.

The Examiner has rejected claims 1 to 3 and 5 to 7 under 35 U.S.C. § 102(b) over the Tatar U.S. Patent No. 5,910,142. Tatar discloses a pedicle screw device with a curvate head received by a cylindrical body element. The "head 104 includes a constant radius of curvature lower portion 106 which is convex and therefore defines a partial hemispherical section." (column 5, line 5-7). "The body element includes a curvate taper 126 which forms a socket, preferably having the identical radius of curvature of the lower half 106 of the screw 100." (column 5, line 24-27). Tatar makes no express or implied indication of an interference fit between the screw and the body element.

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Anticipation exists only if all of the elements of the claimed invention are present in a system or method disclosed, expressly or inherently, in a prior art reference. Tatar expressly fails to incorporate an interference fit in its device. Rather, Tatar specifically discloses an identical radius of curvature between the screw and body. The Tatar device contains express intent to avoid non-identical radii, fundamental to an interference fit, and thus teaches away from the present invention. The present invention addresses a distinct physical characteristic, which results in a proven functional advantage. Since Tatar does not address this feature, there can be no anticipation.

The Examiner has rejected claims 1 to 3 and 5 to 6 under 35 U.S.C. § 102(b) over the Biedermann et al. U.S. Patent No. 5,443,467. Biedermann et al. show a bone screw with a spherical screw head and a cylindrical receiver member. Further "the radius of the spherical surface corresponds substantially to the radius of the spherical segment-shaped portion of the head." (column 2, lines 53-54).

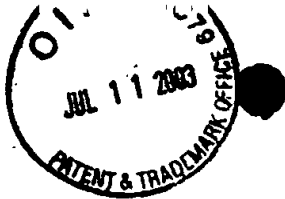
Biedermann et al. do not expressly disclose a device with an interference fit. Rather, they propose "substantial correspondence" between the radius of curvature of the screw and the receiver. "Substantial correspondence" demonstrates intent to achieve identical, or at least substantially close to identical, radii of curvature. This language fails to imply the use of an interference fit, which utilizes intentionally non-identical radii. Biedermann et al. introduce no language that even remotely introduces a suggestion that an interference fit could improve the device. As with Tatar, Biedermann et al. teach away from the present invention.

Tatar and Biedermann et al. never mention or discuss the strength of the locking force, which is the fundamental element of Applicant's device. Neither device suggests

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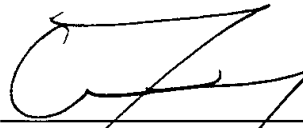
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improved performance either expressly or inherently, through an interference fit. The performance of a vertebrae bone screw relies heavily on the capacity of its locking power. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Applicant submits that the case is presently in condition for allowance and requests favorable reconsideration and early notice of allowance.

Respectfully submitted,

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